Abstracts from the 38th Annual Meeting of the Society of General Internal Medicine

SCIENTIFIC ABSTRACTS

"WE ALL HAVE DIFFERENT STORIES": VETERANS' EXPERIENCES AND PREFERENCES FOR PROACTIVE IN-BETWEEN VISIT CARE Ashley E. Jensen[1, 2]; Nicole Skursky[1]; Erica Sedlander[1]; Katherine Barboza[1]; Katelyn Bennett[1, 2]; Scott Sherman[2, 1]; Mark D. Schwartz[2, 1]. [1]NYU School of Medicine, New York, NY; [2]VHA New York Harbor Healthcare System, New York, NY. *(Tracking ID #2198048)*

BACKGROUND: Medical home models, like VA's Patient Aligned Care Team (PACT) seek to engage patients via proactive outreach for prevention and chronic disease management (panel management). We know little about patients' perspectives, experiences and preferences in receiving this type of non-face-to-face care. To address this gap and inform future implementation efforts, we conducted a qualitative study of veterans at two VA campuses.

METHODS: We conducted a qualitative study of veterans with hypertension or current smoking, who had participated in a cluster-randomized trial of panel management support in which Panel Management Assistants provided outreach and coaching to veterans. We recruited eligible patients by mail and phone, who were invited to participate in focus groups stratified by hospital, gender (six male and four female groups), and age (under or over age 60). Participants completed brief questionnaires to ascertain their health status and supplemental demographic information. Discussion questions focused on facilitators and barriers to healthy behavior change, experience with proactive outreach, and preferences for receiving care in-between visits. Each focus group was audio recorded and transcribed, and supplemental field notes were taken. A subset of transcripts was reviewed independently by four researchers, who then created an initial consensus codebook. Two researchers independently coded each transcript, modified the codebook as new themes emerged, and met to reconcile coding. Nvivo software was used for analysis.

RESULTS: A total of 1179 patients were invited, 127 were scheduled to attend, and 77 participated. Participants had a mean age of 59 years, were predominantly African American (64 %), and completed at least some college (57 %) with 29 % reporting that they worked outside the home. Most participants had hypertension (78 %), and smoked at least 100 cigarettes in their lifetime (77 %). Participants generally appreciated existing efforts to provide care in between visits including post-discharge phone calls and reminder letters. As one veteran put it, "I don't mind somebody calling and checking up on me because that's letting me know that you care...." Participants were receptive to additional outreach for referral, reminders and motivational support in between visits. However, they felt that these outreach efforts should be tailored to their needs and preferences in terms of frequency, content and mode of contact and some had concerns about privacy. Although many participants were open to non-clinicians contacting them as long as they had strong communication skills, empathy, connection to PC teams and training, many felt that the individual should be a veteran or at least able to relate to their military experience. Avoiding medications was a consistent motivator for making lifestyle changes and female veterans in particular wanted access to more holistic health options either at the VA or within their communities.

CONCLUSIONS: Our findings indicate that veterans are receptive to proactive outreach for prevention and management of chronic conditions, especially when this outreach is personalized and flexible. This study has important limitations as it was restricted only to veterans and those agreeing to attend a focus group. However, the information gathered from this study will be useful to inform the design of future panel management efforts.

"I JUST WANT MY DOCTOR'S UNDIVIDED ATTENTION": PATIENT PERCEPTIONS OF THE IMPACT OF EMR USE ON COMMUNICATION Obiama Ukabiala[3]; Wei Wei Lee[1]; Lollita Alkureishi[1]; Laura Ruth Venable[2]; Samantha Ngooi[2]; Jeanne M. Farnan[1]; Vineet M. Arora[1]. [1]University of Chicago, Chicago, IL; [2]University of Chicago Medical Center, Chicago, IL; [3]Pritzker School of Medicine, Chicago, IL. *(Tracking ID #2196181)*

BACKGROUND: The use of the Electronic Medical Record (EMR) in exam rooms can impede the doctor-patient relationship. Little research to date has explored patient perceptions of provider EMR use and the impact on communication. Despite widespread EMR use, few curricula teach providers how to use the EMR to enhance communication with patients. The aims of our study are to identify patients' perceptions of EMR use and elicit their suggestions to inform development of a patient-centered EMR use curriculum.

METHODS: Patients seen by internal medicine attendings and residents at the University of Chicago's primary care clinic were randomly selected for our study. One year after EMR implementation, trained research assistants conducted structured telephone interviews with patients using critical incident technique and appreciative inquiry to elicit their positive and negative perceptions of EMR use by physicians. Using constant comparative analysis, three investigators independently coded 10 % of the transcripts to develop the coding library. An additional 10 % of the transcripts were coded to establish inter-rater reliability. The coding library was applied to the remainder of the transcripts for analysis using ATLAS.ti software.

RESULTS: Of the 384 patients selected, 12 were excluded due to disability, language barriers, or death. Of the 372 eligible patients, 113 telephone interviews were completed. The interviews revealed two overarching themes: (1) Clinical Functions of EMR (2) Communication functions of EMR. Six subthemes were identified: (1) Documentation functions of the EMR (2) Clinical Workflow functions of EMR (3) EMR as educational resource (4) Information access, (5) Facilitate Engagement and (6) Physical focus. To date we have analyzed 58 % (56/113) of the transcripts. Overall, 84 % (576/687) of total codes reflected positive perceptions of EMR. The majority of the positive perceptions fell under the "Clinical Workflow Functions of EMR" subtheme (i.e. 'increases clinical efficiency' and 'promotes teamwork and communication between doctors'). For example one patient said 'they can see all the other doctors' notes… they really work together as a team. I love it!' Only 16 % (111/687) of the codes represented negative perceptions. Interestingly, 45 % (50/111) of negative codes fell under the "Physical Focus" subtheme (i.e. "poor eye contact" and "unbalanced focus"). For example one patient stated 'how can you focus on the patient if you're looking somewhere else… it gets in the way.'

4476 IU/L and low haptoglobin of <8 mg/dL. The peripheral blood smear showed schistocytes and fragmented red blood cells, compatible with microangiopathic hemolytic anemia (MAHA). The patient was started on steroids for suspected autoimmune hemolytic anemia. However, Coombs test was negative, and her hemoglobin responded appropriately to multiple transfusions of packed red blood cells, therefore steroids were discontinued. An extensive hematological workup eventually revealed severe B12 deficiency with positive intrinsic factor antibodies. The patient was treated with subcutaneous B12 injections and had near normalization of her hematological indices within 3 weeks of initiating treatment.

DISCUSSION: RBC fragmentation and destruction associated with severe vitamin B12 deficiency is a relatively rare and underreported phenomenon. It is attributed to ineffective erythropoiesis leading to intramedullary hemolysis. This type of "pseudo-thrombotic microangiopathy" is commonly misdiagnosed and treated as TTP. One small retrospective study has found that the pseudo-thrombotic microangiopathy has been associated with lower reticulocyte counts and higher LDH levels than true TTP, as was seen in our case.

SEVERE MYELOSUPPRESION SECONDARY TO ACCIDENTAL DAILY METHOTREXATE Bharat Rao; Shahzaib Nabi; Rohit Gulati; Michael H. Lazar. Henry Ford Hospital, Detroit, MI. *(Tracking ID #2189080)*

LEARNING OBJECTIVE #1: Early recognition and treatment of methotrexate toxicity and associated myelosuppresion.

LEARNING OBJECTIVE #2: Importance of medication reconcillation in patient care.

CASE: A 67-year-old Hispanic female presented with a 5-day history of bleeding sores from her mouth, pain on swallowing, watery diarrhea, and fatigue. She has a history of breast cancer diagnosed and treated 10 years ago with lumpectomy, chemotherapy, and radiation. She also has a significant history of psoriasis and diabetes mellitus type 2. She has no personal or family history of autoimmune diseases, leukemia, or lymphoma. She reported taking an unknown medication for psoriasis. On exam, she was febrile and tachycardic. She had erosions of lips with associated bleeding and oral ulcerations. Her abdominal exam revealed mild diffuse tenderness but no hepatosplenomegaly. Lab work revealed pancytopenia that decreased progressively to WBC 0.4 billion cells/L (ANC 0), hemoglobin 6.6 g/dL, and platelet count 17 billion/L. Other remarkable initial labs included elevated transaminases (AST 183 U/L, ALT 157 U/L). The initial differential diagnosis included acute leukemia, drug induced pancytopenia, and infectious processes. Broad-spectrum antibiotics were initiated during admission for neutropenic fever. Initial infectious work-up was negative. Further hematologic labs revealed normal iron studies and vitamin B12 level, low reticulocyte count and low folate (4.7 ng/ml). She underwent a bone marrow biopsy, which revealed marked trilineage hypolastic bone marrow without definitive evidence of lymphoproliferative disease. She did receive blood transfusions given low hemoglobin. On day five the patient's family brought her medications along with her pillbox. It was discovered she was prescribed methotrexate 10 mg weekly. However, on inspection of her weekly pillbox, she was noted to have a methotrexate tablet for each day. A presumptive diagnosis of methotrexate toxicity was given. She was immediately initiated on intravenous folinic acid treatment. Methotrexate level was ordered on day five of admission, and returned<0.10 umol/L; however this was several days after her last exposure. Given she still had diarrhea and persistent fevers, a CT abdomen was ordered to rule out enterocolitis; it revealed cholelithiasis, with mild fat stranding surrounding the gallbladder. This was followed by a HIDA scan with findings consistent with acute cholecystitis. She also had urinalysis that was positive for ampicillin-resistant and vancomycin-resistant enterococcus. Clostridium dificile testing was negative during admission. Although she was clinically asymptomatic from gallstones at the time of imaging, it was decided to pursue cholecystostomy placement in light of her neutropenia and persistent fevers. Her antibiotic coverage was changed to cefepime and metronidazole for cholecystitis, and daptomycin for the enterococcus. In addition, the decision was made to administer her granulocyte-colony stimulating factor. During her clinical course, she showed gradual symptomatic improvement and her blood counts increased. Upon follow-up with hematology as an outpatient, her blood counts had normalized and she was reportedly doing well.

DISCUSSION: Methotrexate has been used as a treatment of psoriasis for many years and is generally prescribed as a low dose taken weekly. Generally, severe side effects are rare when taken as prescribed and with folic acid supplementation. This case highlights several clinical clues to identifying methotrexate toxicity including stomatitis, GI symptoms, fatigue, fever and transaminitis. However, it is important to recognize that fever should not be soley attributed to drug induced toxicity, and that infectious etiologies should be ruled out. Her labs showed low folate secondary to methotrexate's antagonist effect on dihydrofolate reductase and replacement is one of the mainstays of overdose treatment. Myelosuppresion, as in this case, can be fatal and treatment should focus on rapid identification and treatment of an underlying etiology, empiric antibiotic coverage for neutropenic fever, supportive transfusions as needed, and consideration of granulocyte stimulating factors. Moreover, one of the most important learning points in this case is that a thorough medication review including efforts to identify unknown medications or non-traditional medications might lead to an earlier diagnosis. It is also important to ensure patient understanding of medication doses and frequency upon prescribing in order to prevent severe adverse events like in this case.

SEVERE PULMONARY HYPERTENSION FROM CHRONIC, UNTREATED POLYMYOSITIS WITHOUT INTERSTITIAL LUNG DISEASE Benjamin Barbash[2]; David M. Levine[2]; Natalie K. Levy[1]. [1]NYU School of Medicine, Bellevue Hospital, New York, NY; [2]New York University School of Medicine, New York, NY. *(Tracking ID #2196353)*

LEARNING OBJECTIVE #1: Describe the natural history of polymyositis

LEARNING OBJECTIVE #2: Formulate a differential diagnosis for shortness of breath in patients with polymyositis

CASE: A 68 year-old female with hypertension, osteoporosis, and polymyositis (PM) presented with two weeks of severe shortness of breath at rest. Eight years prior she developed quadriceps weakness, which gradually progressed such that she became bed-bound 3 years prior. PM was diagnosed by a neuromuscular specialist 7 months prior, after deltoid muscle biopsy demonstrated degenerative muscle fibers without inclusions, consistent with chronic PM. Daily high-dose prednisone was started 6 months prior to admission, but the patient was subsequently lost to follow-up. Her exam revealed 95 % saturation on 4 L oxygen with rapid, shallow breaths, accessory muscle use, 1/5 bilateral proximal muscle strength, and 5/5 distal muscle strength. TTE demonstrated moderate-to-severe pulmonary hypertension (PH), severe right ventricular dilatation, preserved LVEF, and no anatomic defects or shunting. Chest CT and V/Q scan showed no thromboembolic disease and no interstitial lung disease (ILD). Right heart catheterization demonstrated pulmonary artery pressure 68/19 mmHg, wedge pressure 12 mmHg (no vasodilator response). Sleep study ruled out OSA. FEV1 was 0.55 L, FVC 0.69 L, FEV1/FVC 79 %, DLCO 3.7 mL/mmHg/min (normal is 15.8 mL/mmHg/min), and mean inspiratory pressure -17cmH_20 (normal range -65cmH20 to -95cmH20). Labs showed normal serum ESR, CRP, CPK, aldolase, negative antibodies to Jo-1, scl70, anti centromere, SSA, SSB, RNP, and smith. ANA and dsDNA were both weakly positive (1:40 [nucleolar] and 11 IU/mL, respectively). A trial of mycophenolate mofetil and prednisone provided no symptomatic improvement. Physical therapy and overnight bilevel offered minimal symptomatic relief.

DISCUSSION: Our case highlights the natural history of PM and the importance of maintaining a broad differential for SOB. PM is an idiopathic inflammatory myopathy characterized by proximal skeletal muscle weakness. Diagnostic criteria vary but generally rely on clinical (symmetric proximal weakness), laboratory (elevated CK, aldolase, or liver enzymes), electromyographic (irritable myopathy), radiographic (MRI with muscle inflammation), and histologic (inflammatory infiltration) criteria. Patients are diagnosed with definite, probable, or possible PM based on the number of criteria met. Our patient regrettably represents the natural history of untreated PM: proximal muscle inflammation and weakness that progresses to severe debilitation and non-viable muscle tissue. Active disease is treated with steroids and/or immune modulator therapy. However, therapy has limited value in longstanding disease, as in our patient. To our knowledge, this is the first account of PH secondary to PM without the presence of ILD. While the association of PH with various connective tissue diseases (particularly scleroderma) is well known, knowledge of PM-induced PH is limited. Two other cases with ILD have been described, while 8 additional patients with overlap of PM-dermatomyositis and PM-Sjogrens have been reported. The differential diagnosis for PH generally includes 5 groups: pulmonary arterial hypertension, PH secondary to left heart disease, PH due to lung disease, PH from chronic thromboembolic disease, and PH due to unclear multifactorial mechanisms. As our patient lacked significant left heart disease and unclear pulmonary dysfunction, she required PFTs, V/Q scan, polysomnography, autoimmune testing, and cardiac catheterization to rule out all but the last of these groups, leaving PM the cause of her PH. While the pathophysiology of PM-induced PH without ILD is not well understood, we postulate that diaphragmatic weakness causes poor lung expansion, atelectasis, and chronic hypoxemia, with ensuing PH. Our case illustrates the importance of early recognition of PM and is the first account of PM-induced PH in the absence of ILD.

SEVERE THROMBOCYTOPENIA CAUSED BY NASH Gen Yamada[2]; Christine Kwan[1, 2]. [1]Teine Keijinkai Hospital, Arlington, TX; [2]Teine Keijinkai Hospital, Sapporo, Japan. *(Tracking ID #2199817)*

LEARNING OBJECTIVE #1: Recognize that severe thrombocytopenia can be caused by nonalcoholic steatohepatitis (NASH)

CASE: A 39-year-old Asian woman is transferred for possible splenectomy. She initially visits her primary care physician 5 weeks ago with gingival bleeding and purpura for which blood tests show platelet counts <2000 / L and slightly elevated liver function tests.